



Topics

- **PAC Questions**
- **Technical Decisions**
- **Date of Next Meeting**
 - **T-F, August 25-26**
 - **S-S, August 27-28**
 - **M-T, August 29-30**
 - **Snowmass ILC workshop ends Aug 27**
 - **COSMO 05 starts Aug 28 in Bonn**



PAC Questions

- **1. What is the future evolution of the NOvA program in the absence of a Proton Driver?**
 - More detector? LA technology?
 - How well does the mass ordering get decided in this scenario?
- **2. Mechanical and structural issues. Build a prototype. What safety or environmental concerns may arise due to the novel structure? What approvals will be necessary, and what will be their impact on cost and schedule?**



PAC Questions

- 3. Verify photoelectron count with a full size prototype and fiber as soon as possible.
- 4a. Complete a study of the cosmic ray background in a timely manner.
- 4b. Study the beam-background strategy and the practical aspects of moving the detector. How important are MIPP and MINERvA measurements?
- 5. Perform more complete full-simulation studies of the expected detector performance, addressing in particular the energy reconstruction accuracy as a function of the incoming neutrino energy, down to the lowest relevant energies.



PAC Questions

- **6. How could the results of a “medium-scale” reactor neutrino experiment be used with results from NOvA, and from NOvA and T2K, in order to improve the combined sensitivity? If a contemporaneous medium-scale reactor experiment exists, how could the NOvA run program be adapted to provide the best combined sensitivity?**
 - Reactors give a negligible increase in sensitivity for mass ordering and CP.
 - Best strategy is to ignore the reactor experiments.



PAC Questions

- **7. Plot NO ν A sensitivities for fewer pot.**
 - They generally scale as the square root.
- **8. Plot NO ν A sensitivities in the PD era compared to a high-intensity T2K program with and without HyperK.**
 - Does this refer mainly to sensitivity to θ_{13} ?



Technical Decisions

- **In any technical decision, we need to consider three factors and their associated risk factors:**
 - Cost
 - Schedule
 - Performance
- **Decisions which have minimal impact on performance (i.e., physics) can usually be made by project management after a technical evaluation.**
- **Decisions which have a substantial physics implication may require more collaboration input.**



Examples

- **Surface or underground?**
 - Performance is improved by going underground.
 - At present, performance risk is high to staying on the surface.
 - Cost is probably higher in going underground.
- **Site: We will consider both Ash River and Orr-Buyck.**
 - Physics “cost” in going to Orr-Buyck is somewhere between 2 and 6%.
 - Cost may be 2 or 3 M\$.
 - Other factors may become important.